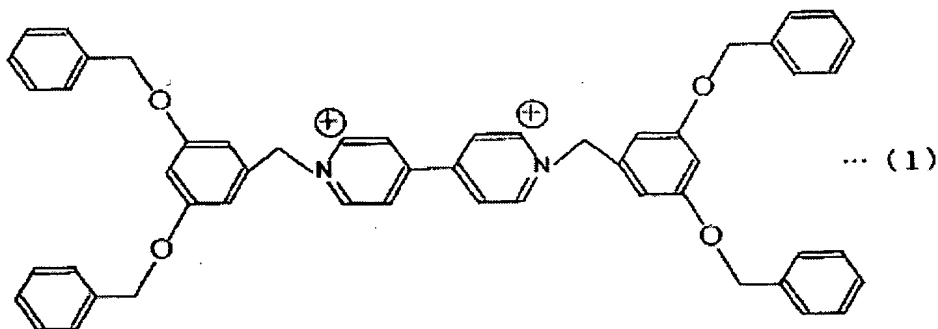


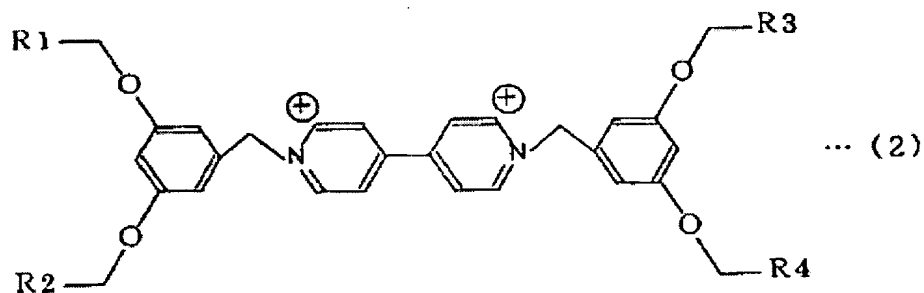
## WHAT IS CLAIMED IS:

1. A photochromic compound which sensitizes a wavelength region of not less than 700 nm or a specific infrared region to thereby exhibit  
5 absorbency at a visible region.

2. The photochromic compound according to Claim 1, which comprises a 4,4'-bipyridine derivative represented by the following formula  
(1):



3. The photochromic compound according to Claim 1, which comprises a 4,4'-bipyridine derivative represented by the following formula  
(2):

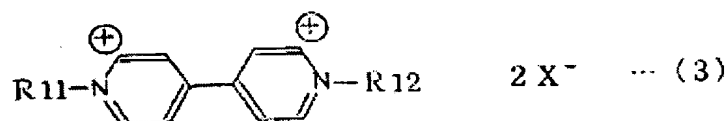


wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> may be the same or different from each other and

each is a condensed aromatic hydrocarbon or a derivative thereof.

4. The photochromic compound according to Claim 1, which comprises a 4,4'-bipyridine derivative represented by the following formula

5 (3):



wherein  $\text{R}_{11}$  and  $\text{R}_{12}$ , may be the same or different from each other and each is an alkyl group having 1 to 10 carbon atoms or a derivative thereof; and  $\text{X}^-$  is selected from among  $\text{Cl}^-$ ,  $\text{BF}_4^-$ ,  $\text{PF}_6^-$ ,  $\text{AsF}_6^-$ ,  $\text{ClO}_4^-$ , and  $\text{NO}_3^-$ .

10

5. A photochromic composition comprising a solution having the photochromic compound according to any one of Claims 1 to 4 dissolved in one solvent or a mixed solvent selected from among dimethylformamide (DMF), dimethylacetamide, propylene carbonate, acetonitrile, gamma-  
15 butyllactone, and butanol.

6. A photochromic film comprising a film having the photochromic compound according to any one of Claims 1 to 4 dispersed therein.

20

7. A photochromic composition at least comprising the photochromic compound according to any one of Claims 1 to 4 and a ultraviolet absorber, which absorbs a ultraviolet light.

8. A functional element, comprising

a photochromic which sensitizes a wavelength of not less than 700 nm or a specific wavelength within an infrared region, and which exhibits absorbance within a visible region, and

5 a light source which has an energy strength at a wavelength region of not less than 700 nm or a specific wavelength within an infrared region enough for being sensitized by the photochromic compound,

wherein a photochromic phenomenon, which sensitizes a wavelength of not less than 700 nm or a specific wavelength within an infrared region,  
10 and which exhibits absorbance within a visible region, is utilized.

9. The functional element according to Claim 8, which possesses a ultraviolet shielding member, which shield an incident ultraviolet light entering in the functional element.

15

10. The functional element according to Claim 8, wherein said photochromic layer containing the photochromic compound at least comprises a ultraviolet absorber, which absorber a ultraviolet light.

20 11. The functional element according to any one of Claims 8 to 10, which is a photochromic display element.

12. The functional element according to any one of Claims 8 to 10, which is an anti-glare mirror.